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Patent Amendment

REMARKS

This application has been carefully reviewed in light of the Office Action dated January 28, 2004. Reconsideration and favorable action in this case are respectfully requested.

The Examiner has rejected claim 1-2, 5-9, 12-16 and 19-32 under 35 U.S.C. §101, as being inoperative and therefore lacking utility. The Examiner reasons that the inclusion of the term "explosive" in regards to an explosive reaction occurring while the device being formed is present renders the invention inoperative, as a semiconductor device is a fragile item that will be damaged by such an explosive reaction.

Applicant strongly disagrees with this assertion by the Examiner. First, the entire focus of the present claims, which has been discussed in seven previous responses by the Applicants, is that the claims define specific techniques by which the explosive reaction of the gases in the processing chamber can be maintained at safe levels for the semiconductor device. These claims are directed to allowing an explosive reaction to occur while avoiding drastic changes in pressure and thus provide a significant benefit. The Examiner's contention that a semiconductor device is a fragile and will be damaged by an explosive reaction ignores the claim language that is directed to protecting the semiconductor device from the explosive reaction. The question is not whether an explosive reaction *could* damage the device – the question is whether a device fabricated as taught by the claims as a whole *must* damage the semiconductor device such that the claims would have no utility. In the present application, each claim provides specific guidance for reacting the gases in an explosive reaction, yet in a manner such that the semiconductor device will not be damaged. Second, the documentation provided in the Rule 131 affidavit specifically shows that an explosive reaction between H₂ and O₂ can be safely conducted while providing a significant benefit is selective oxidation.

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The Examiner has rejected claims 1-2, 5-9, 12-16 and 19-32 under 35 U.S.C. §112, first paragraph, under the reasoning that claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The examiner states that the inclusion of the limitation of "an explosive reaction" between the hydrogen containing gas and the oxygen containing gas is not enabled by the application's specification. Further, the Examiner states that the limitation of introducing O₂ and H₂ in an explosive reaction to the insulating layer, silicon-containing structure and conductive structure is not enabled, since the O₂ and H₂ are introduced to the chamber rather than the insulating layer, silicon-containing structure and conductive structure.

With regard to the Examiner's contention that that the limitation of introducing O₂ and H₂ in an explosive reaction to the insulating layer, silicon-containing structure and conductive structure is not enabled, since the O₂ and H₂ are introduced to the chamber rather than the insulating layer, silicon-containing structure and conductive structure, Applicant does not believe that any claim contains this language.

With regard to the Examiners continued assertion that the inclusion of the limitation of "an explosive reaction" between the hydrogen containing gas and the oxygen containing gas is not enabled by the application's specification, Applicants reassert their position that the law clearly states that using a new word to rephrase what is shown in the application is not new matter. *In re Anderson*, 471 F.2d 1237, 176 USPQ 331, 336 (CCPA 1973) ("containing" changed to "carrying" in claims). Further, the drawings may provide a written description to support a claim. *In re Wolfensperger*, 302 F.2d 950, 133 USPQ 537 (CCPA 1962). Hence, the Examiner's argument that "there is no language in the specification to support the term 'explosive' is simply not dispositive of whether the claims are supported by the specification.

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The specification discusses a reaction between O_2 and H_2 (as well as other embodiments of oxygen-containing gases and hydrogen-containing gases) to produce the selective oxidizing. A reaction between O_2 and H_2 is explosive if the partial pressure is above the explosion limit (the Nakajima reference, previously cited by the Examiner, states that the explosion limit is at a partial pressure of about 4%). Applicant has provided many examples in the specification where one of the gases is set at a partial pressure above the explosion limit. On page 7, a constant volume mix of O_2 and H_2 in a ratio of 1:10 are reacted at an initial pressure of 200 Torr. On page 8 (last paragraph), 12% O_2 and H_2 are introduced into the chamber. On page 11, an O_2/H_2 mixture of 20% is described. All of these reactions are above the explosion limit set by the Examiner's reference (see Nakajima, col.6, lines 24-55). All of the aforementioned reactions are *in fact* explosive, as would be clearly known to one skilled in the art, as evidenced by the Nakajima reference. Further, the specification specifically describes techniques to avoid harmful consequences of the reaction, which would be unnecessary in the absence of an explosive reaction.

In the Response to Arguments section of the present Office Action, the Examiner states that "there are available other ways to describe the reaction without the term explosive, as this term implies that the device being formed will be rendered inoperative.

Once again, Applicants strongly disagree. The only issue is whether the application discloses use of an explosive reaction. A constant volume mix of O_2 and H_2 in a ratio of 1:10 at an initial pressure of 200 Torr will, *in fact*, produce an explosive reaction. That there are other available ways to describe the reaction without the term "explosive" is completely irrelevant. There are always other available ways to describe terms in a claim. Applicant disagrees that the term *implies* that the device being formed will be rendered inoperative when the claim is read *as a whole*. Further, any "implication" is irrelevant to whether claim is supported by the specification.

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The Examiner has rejected claims 1-2, 5-9, 12-15, 20-23 and 27-28 under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 6,197,702 to Tanabe et al (hereinafter "Tanabe") in view of U.S. Pat. No. 6,037,273 to Gronet.

As discussed in connection with prior responses, Tanabe does not show an explosive reaction in the processing chamber, as required by the present claims. In Tanabe, a water vapor/hydrogen mixed gas (H_2 and H_2O) enters the processing chamber. The H_2 and H_2O are not capable of an explosive reaction in the processing chamber. The water vapor/hydrogen mixed gas is produced by reacting H_2 and O_2 in a catalytic converter 141 external to the processing chamber 101 (col. 14, line 66 through col. 15, line 12). There is thus no reaction which occurs in the processing chamber 101, as required by the claims. Furthermore, a catalytic conversion will not involve an explosive reaction.

The Examiner has relied on the Gronet reference to overcome the deficiencies of the Tanabe reference. In the Amendment of October 23, 2003, the Applicants provided a Declaration Under Rule 131 showing conception and reduction to practice at least as early as March 2, 1998, in support of an invention date prior to the filing date of the Gronet. The Examiner does not contend that the Affidavit is not sufficient to support a date of invention preceding the Gronet filing date of March 2, 1998. Instead, the Examiner states that the Gronet reference has an effective filing date of July 11, 1997, because the Gronet reference is a continuation-in-part of application 08/893,774 (hereinafter the '774 application), filed July 11, 1997.

Applicants contend that the Examiner has not established that the Gronet reference has an effective filing date of July 11, 1997. The Gronet application is a *continuation-in-part* of the '774 application. A continuation-in-part application is allowed to contain subject matter not found in the parent application. There has been no showing that the passages cited from the Gronet *patent* by the Examiner were supported by disclosure in

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the '774 application. See MPEP 2136.03. In order for the Applicants to respond to the Examiners assertions, the Examiner must provide a copy of the '774 application and specify which text supports the teaching used for the present rejection.

Further, the '774 application does not appear to have issued as a patent other than through continuation-in-part applications. Applicants would have no idea whether the application was operable or enabling.

Accordingly, without a showing that the Gronet reference is entitled to an effective filing date for the purposes set forth by the Examiner, Applicant contends that the Gronet application is only entitled to a filing date of March 2, 1998.

An extension of one month is requested and a Request for Extension of Time under § 1.136 with the appropriate fee is attached hereto.

The Commissioner is hereby authorized to charge any fees or credit any overpayment, including extension fees, to Deposit Account No. 20-0668 of Texas Instruments Incorporated.

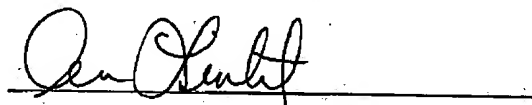
Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Alan W. Lintel, Applicants' Attorney at (972) 664-9595 so that such issues may be resolved as expeditiously as possible.

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For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,



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